AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-13. (canceled).

14. (currently amended): ~~The use of the catalyst as claimed in one of claims 1 to 5 in a process for the hydrotreating~~ A process for hydrotreatment of a hydrocarbon~~s~~ feedstock, comprising:

carrying out ~~after~~ in situ or ex situ sulfurization of ~~this~~ a catalyst by contacting the catalyst with at least one sulfur compound ~~chosen~~ selected from hydrogen sulfide, mercaptans, sulfides, ~~and/or~~ polysulfides ~~and~~ or other sulfurizing compounds, the catalyst comprising a support formed of refractory oxides, at least one metal from Group VIII and at least one metal from Group VI, both in the oxidized form, and comprising at least one sulfone compound and/or sulfoxide compound derived from at least one benzothiophene compound; and

hydrotreating the hydrocarbon feedstock in the presence of the catalyst,

wherein said at least one sulfur compound may be present in ~~or by~~ the feedstock ~~to be hydrotreated~~.

15. (currently amended): A process for the purification, down to less than 10 ppm of sulfur, of a sulfur-comprising, a nitrogen-comprising and/or an aromatic hydrocarbon feedstock, comprising a first stage of hydrotreating the hydrocarbon feedstock in the presence of ~~the~~ a

catalyst ~~as claimed in one of claims 1 to 5~~, after sulfurization of ~~this~~ the catalyst, and a second stage of oxidizing desulfurization of the hydrotreated feedstock,

wherein the catalyst comprises a support formed of refractory oxides, at least one metal from Group VIII and at least one metal from Group VI, both in the oxidized form, and comprising at least one sulfone compound and/or sulfoxide compound derived from at least one benzothiophene compound.

16. (currently amended): The process as claimed in claim 15, characterized in that the oxidizing desulfurization is carried out in the presence of a metal catalyst based on refractory oxides supporting at least one metal from each of Groups VI and VIII and of an oxidizing agent chosen from organic or inorganic peroxides and hydroperoxides and organic or inorganic peracids~~, hydrogen peroxide and tert-butyl hydroperoxide being preferred~~.

17. (currently amended): The process as claimed in claim 16, characterized in that the modified metal catalyst obtained at the end of the oxidizing desulfurization cycle is used as hydrotreating catalyst, after ex situ sulfurization or in situ sulfurization in ~~the~~ a hydrotreating reactor.

18. (currently amended): The process as claimed in one of claims 15 to 17, characterized in that ~~it~~ the process is carried out in the same reactor or in at least two separate reactors.

19. (original): The process as claimed in claim 18, characterized in that the two separate reactors operate alternately in hydrotreating and in oxidizing desulfurization, each carrying out a different treatment.

20. (original): The process as claimed in claim 18, characterized in that one of the reactors always operates in hydrotreating and the other reactor always operates in oxidizing desulfurization.

21. (currently amended): The process as claimed in ~~one of~~ claims 15, 16, 17, 19 or 20 ~~to 20~~, characterized in that the hydrocarbon feedstock is a hydrocarbon feedstock with minimum and maximum boiling points of between 40 and 560°C.

22. (new): The process as claimed in claim 16, wherein the oxidizing agent is hydrogen peroxide or tert-butyl hydroperoxide.

23. (new): The process as claimed in claim 14 or 15, wherein said compound is chosen from sulfones and sulfoxides of benzothiophenes, sulfones and sulfoxides of dibenzothiophenes, and sulfones and sulfoxides of other polyarylthiophenes, which may or may not be substituted by alkyl or allyl hydrocarbon chains optionally comprising aliphatic and/or aromatic rings, said compound being used alone or in admixture with one or more other said compounds.

24. (new): The process as claimed in claim 14 or 15, wherein said compound is a commercially available sulfone and/or sulfoxide compound, or a sulfone and/or sulfoxide compound originating from oxidation of benzothiophene compounds present in hydrocarbon fractions obtained by refining crude oils.

25. (new): The process as claimed in claim 14 or 15, wherein at least one of the sulfone and/or sulfoxide compounds results from oxidation of a desulfurized or non-desulfurized hydrocarbon fraction by an oxidizing compound chosen from organic and inorganic peroxides and hydroperoxides and organic or inorganic peracids, optionally in the presence of a metal catalyst.

26. (new): The process as claimed in claim 14 or 15, wherein the catalyst comprises at least 0.01% by weight of said at least one sulfone and/or sulfoxide compound.